

## Purpose of Chapter 6

The information presented in this chapter highlights some of the more significant environmentally sensitive areas within the GRP region that could be impacted as a result of an oil spill. Consistent with the overall purpose of the GRP's, this information is only intended to provide a level of detail required during the initial phase of spill response. During an actual event, additional resource information will be available from the resource trustee agencies supporting the Environmental Unit in the Planning Section. Specific resource concerns for areas that already have designated protection strategies in Chapter 4 of the GRP may be found in the "Resources Protected" column in the matrix describing the individual strategies.

The information provided in Chapter 6 is intended for use in:

- Preparing an initial ICS 232 form (Resources-at-Risk summary) for Incident Command
- Identifying those sites where it may be necessary to implement Flight Restriction Zones in order to prevent disturbance/injury to sensitive wildlife species.
- Identifying sensitive shoreline habitats to assist SCAT teams in their initial assessments and to help personnel in the Environmental Unit in developing appropriate cleanup strategies.

Chapter 6 consists of two sets of maps and tables - one for wildlife and the other for fish, shellfish and selected sensitive marine habitats. These data are presented separately, both for ease of reading and because each of the two data sets has slightly different applications within the context of spill response.

The wildlife maps and tables present information on the location and seasonal sensitivity of key wildlife resources. Types of data included here are concentration areas for waterfowl, marine birds and shorebirds; seabird colonies; nesting areas for sensitive species such as eagles, herons and falcons; and marine mammal haulout sites. This information is intended for the rapid identification of areas where significant wildlife oiling impacts could be anticipated and to denote areas where flight restriction zones may be required to protect sensitive wildlife. Each site depicted on these maps is identified by a unique number in order to facilitate the process of communicating Flight Restriction Zone recommendations to the Operations Section in ICS. The tables accompanying the wildlife maps present information on the season(s) during which sites may be particularly sensitive to disturbance.

The fish/shellfish/marine habitat maps present general information on the location of baitfish spawning beaches, herring spawning areas, streams used by anadromous salmonids, hardshell clam concentrations, and kelp and eelgrass beds. This information will be most useful to personnel involved in assessing initial risks to fish and shellfish resources and to those conducting initial beach reconnaissance, pending availability of more detailed resource information and the formation of SCAT teams.

Because the operational uses of this information differ from those of the wildlife data, individual site identification numbers have not been assigned. Tables associated with these maps will identify the seasonal sensitivity of each resource. In addition, notes accompanying each table will provide information on the general distribution and seasonal sensitivity of those resources that are not mapped but may occur anywhere in the GRP region (ex. juvenile salmonids in shallow nearshore waters).

## **6. Sensitive Resource Description\***

### **6.1. Marine Mammals**

Compared to other parts of Puget Sound, this region supports a rather limited array of marine mammal species, the most common and abundant being the harbor seal. A total of 13 seal haulouts are found in this region, the most significant of these being located at Gertrude Island, Chapman Bay, McMicken Island, and Budd Inlet. Most of these sites are used year-round, with pupping occurring from late June through October. These sites are most sensitive during the pupping season due to the risk of mother/pup pairs being separated due to human disturbance. Small numbers of California sea lions and Steller (Northern) sea lions may be found within this region from late fall through mid-spring, especially in the Toliva Shoals and Nisqually delta areas. Neither of these species breed in Washington. Although relatively few Steller sea lions are found in this area, this species is of special concern because it is federally listed as a threatened species. Other marine mammal species periodically found in south Puget Sound include Dall's porpoise, harbor porpoise, orcas (killer whales), and gray whales.

Although not considered a marine mammal, river otters can be found along virtually any shoreline, but prefer the estuaries.

### **6.2. Birds**

South Puget Sound hosts a large variety of birds throughout the year. Although there are no major seabird colonies in this area, the marbled murrelet and bald eagle, both listed as threatened, breed in the vicinity. The numbers of birds increase dramatically as species that breed far to the north start their southward migration in late summer. While most pass through on their way to southern locations many species winter in the area until the following spring.

Species most likely to be encountered include common, Pacific and red-throated loons, horned, red-necked and western grebes, pelagic and double-crested cormorants, great blue heron, Canada goose, brant, American widgeon, greater scaup, surf and white-winged scoters, common and Barrow's goldeneyes, bufflehead, red-breasted merganser, osprey, Bonaparte's, mew, western and glaucous-winged gulls, Caspian tern, common murre, pigeon guillemot, and rhinoceros auklet.

Although numbers can vary by season, major bird concentration areas include Nisqually delta, Tacoma Narrows, Carr Inlet, Case Inlet, Johnson Point, Burley Lagoon, East Bay and Oyster Bay.

### **6.3. Flight Restriction Zones**

Flight restriction zones have been designated in the GRP to minimize disturbance to certain wildlife species. An identified location could represent a marine mammal haulout site, a seabird or heron colony, or the individual nest of a sensitive species such as bald eagle. While some zones may be restricted year around, others will be in effect only during the months listed in the matrix.

The no-fly bubble is the area within a 1,500 foot radius and below 1,000 feet in altitude around the location.

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\* Generated for the GRP by the Spill Response and Resource Protection Team of the Washington Department of Fish and Wildlife

All aircraft, including those from the government, contractors or media, are expected to avoid these zones when restrictions are in effect. In the event that one of these zones must be entered during a spill response, clearance must be obtained from the Washington Department of Fish and Wildlife and the United States Fish and Wildlife Service or when marine mammals other than sea otters are concerned, the National Marine Fisheries Service. Sea otters are managed by the United States Fish and Wildlife Service.

During oil spills, pilots are also asked to avoid disturbing any large concentrations of birds and other wildlife. By keeping a safe distance or altitude, pilots can prevent the accidental hazing of unaffected wildlife into oiled areas and minimize the risk of aircraft/ bird collisions.

#### **6.4. Hazing**

Hazing or directed harassment, is a method used to drive or herd wildlife out of an area where they are at risk of becoming oiled. Hazing techniques include the use of visual and audio devices, personnel for herding, vessels and aircraft. In the right circumstances it can be an effective tool for protecting some wildlife species. In other cases it can be disastrous as unaffected wildlife can be driven into oiled areas, or forced to abandon nests or young.

National Marine Fisheries Service staff or their designees will perform all hazing of marine mammals other than sea otters. Before hazing can begin for all other species of wildlife, clearance must be obtained from the Washington Department of Fisheries and Wildlife and the United States Fish and Wildlife Service. All hazing efforts during a spill will be directed by these agencies. The deliberate harassment of wildlife without first securing permission from these agencies is a violation of Federal and State laws.

The following information must be provided for a determination on whether hazing might be authorized in a given situation.

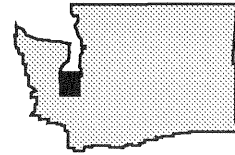
1. Description of the situation where hazing authorization is being sought
2. Location to be hazed
3. Species of wildlife to be hazed and number of animals
4. Methods and equipment used
5. Date and time of hazing
6. Name, phone number, radio frequency, pager number and the amount of hazing experience of the individual requesting permission

The responsible agencies will evaluate each request on a case by case basis. All hazing of marine mammals, threatened and endangered species, and all hazing by aircraft will be performed only under authority and general supervision of WDF&W, USFWS, NMFS or persons designated by these agencies. Representatives of these agencies can be contacted through the planning section of the Unified Command System during the spill event.

GIG HARBOR FLIGHT RESTRICTION ZONES / SENSITIVE WILDLIFE																			Includes half of the month	
Map Page 18474																				
Code	Location	Seabird Colony	Seabird Conc.	Waterfowl Conc.	Marine Mammal Haulout	Sensitive Nesting Species	Shorebird Conc.	Flight Exclusion	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
WSP-1	Tacoma Narrows		Yes	Yes				No												
WSP-2	Carr Inlet		Yes	Yes				No												
WSP-3	Burley Lagoon			Yes				No												
WSP-4	Rosedale Beach				Yes			Yes												
WSP-5	Cutts Island				Yes			Yes												
WSP-2	Horsehead Bay				Yes			Yes												
WC-35	Colvos Passage		Yes					No												
WC-37	Point Dalco					Yes		Yes												
WC-41	Point Defiance					Yes		Yes												
<div>* FLIGHT AND GROUND ENTRY RESTRICTIONS</div> <div><div></div>Flights below 1000 feet require clearance: See appendix on Flight Restriction Zones</div> <div><div></div>Sensitive season - Minimize overflight disturbance</div>																				

**GIG HARBOR****FLIGHT RESTRICTION ZONES FOR SENSITIVE WILDLIFE SPECIES**

1. Pilots refer to the chapter on Flight Restriction Zones.
2. All ground entry within 100 yards of sensitive nesting species is restricted.
3. All boaters are requested to approach no closer than 100 yards to seal and waterfowl concentrations.

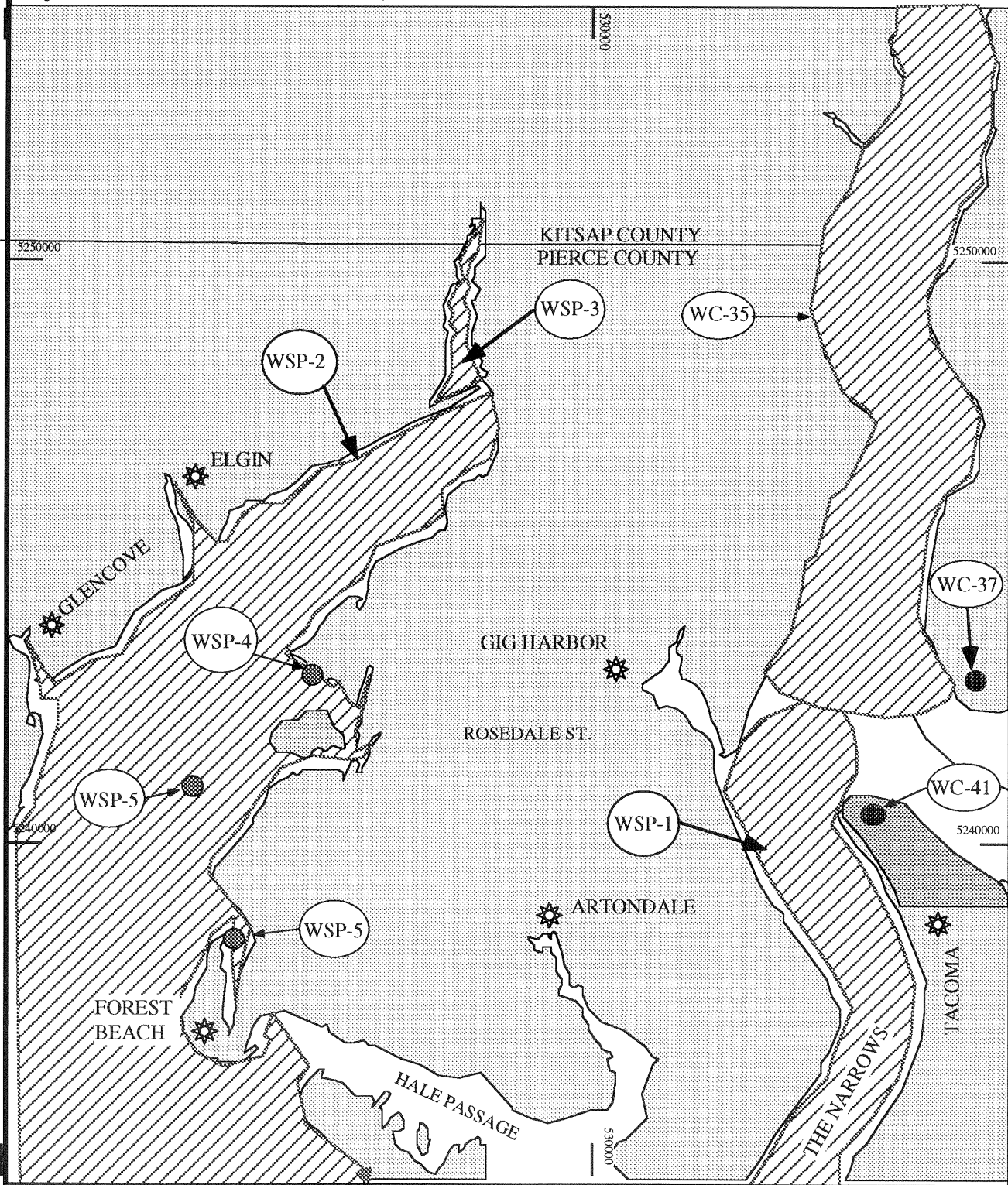


- MARINE MAMMAL HAULOUT
- SENSITIVE SPECIES NESTING
- ⊕ BOAT LAUNCH


- ▨ PARK OR PUBLIC LAND
- ▨ RESERVATION
- ★ TOWN OR CITY



BIRD CONCENTRATION AREA



McNEIL ISLAND FLIGHT RESTRICTION ZONES / SENSITIVE WILDLIFE																				
Map Page 18448																				
Code	Location	Seabird Colony	Seabird Conc	Waterfowl Conc	Marine Mammal Haulout	Sensitive nesting species	Shorebird Conc	Flight Exclusion	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
WSP-1	Tacoma Narrows		Yes	Yes				No												
WSP-2	Carr Inlet		Yes	Yes				No												
WSP-8	Wyckoff Shoal				Yes			Yes												
WSP-9	Gertrude Island				Yes	Yes		Yes												
WSP-11	Eagle Island				Yes			Yes												
WSP-12	Lyle Point / Anderson Island					Yes		Yes												
WSP-13	Nisqually Delta			Yes	Yes	Yes		Yes												
WSP-13	Nisqually Reach		Yes	Yes				No												
<div><div>* FLIGHT AND GROUND ENTRY RESTRICTIONS</div><div><div></div>Flights below 1000 feet require clearance: See appendix on Flight Restriction Zones</div><div><div></div>Sensitive season - Minimize overflight disturbance</div></div>																				

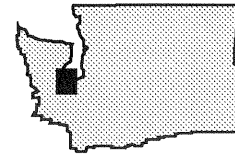
 Includes half the month

# McNEIL ISLAND

## FLIGHT RESTRICTION ZONES FOR SENSITIVE WILDLIFE SPECIES

1. Pilots refer to the chapter on Flight Restriction Zones.
2. All ground entry within 100 yards of sensitive nesting species is restricted.
3. All boaters are requested to approach no closer than 100 yards to seal and waterfowl concentrations.

SOUTH PUGET SOUND GRP

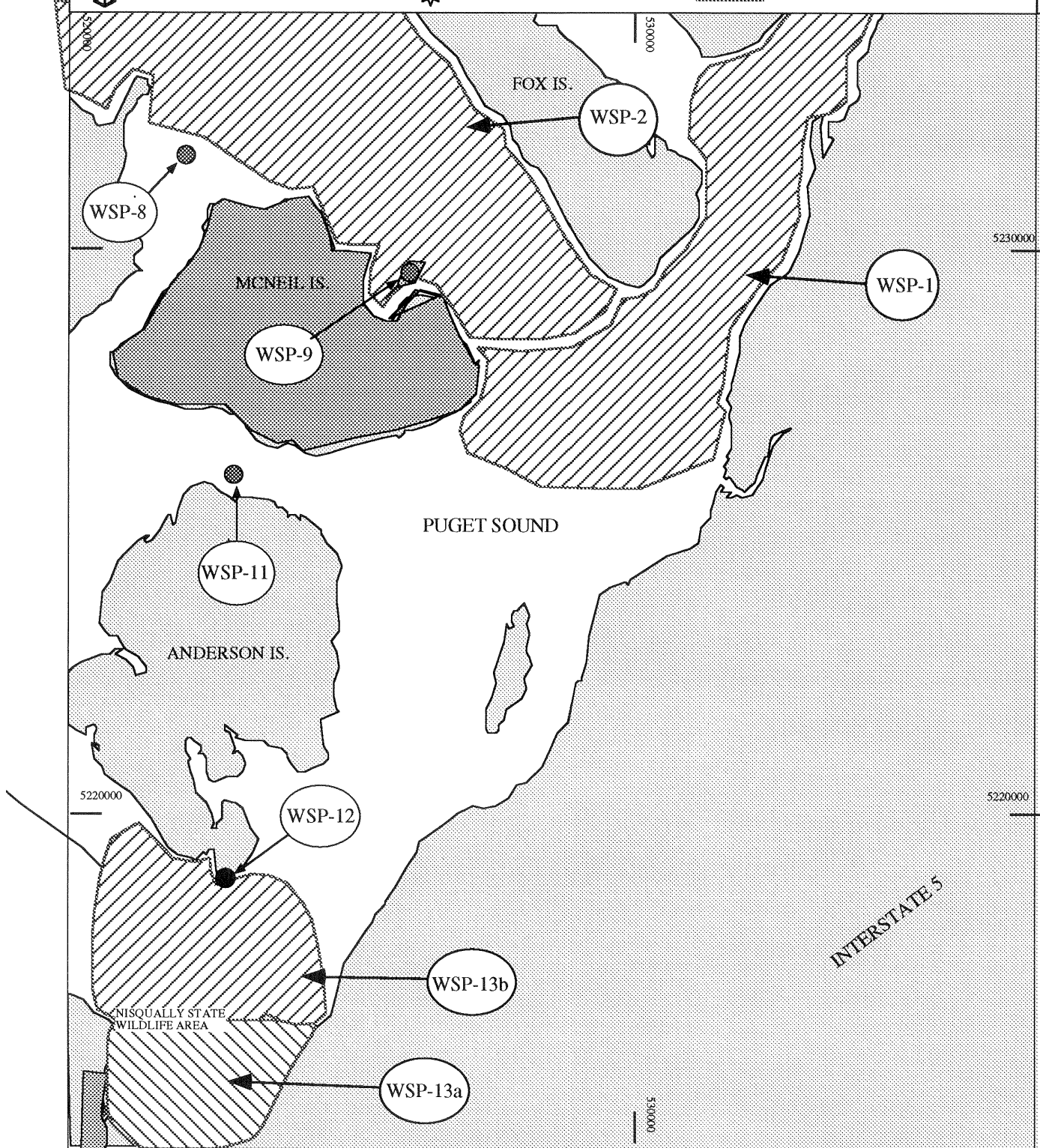


- MARINE MAMMAL HAULOUT
- SENSITIVE SPECIES NESTING
- BOAT LAUNCH

- PARK OR PUBLIC LAND
- RESERVATION
- TOWN OR CITY



BIRD CONCENTRATION AREA



# **BELFAIR FLIGHT RESTRICTION ZONES / SENSITIVE WILDLIFE**

									Flight and Ground Entry Restrictions *											
									PERIOD OF SENSITIVITY											
Map Page 18448																				
		Seabird	Seabird	Waterfowl	Marine Mammal	Sensitive	Shorebird	Flight	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	Location	Colony	Conc	Conc	Haulout	nesting species	concentration	Exclusion												
WSP-24	Case Inlet		Yes					No												
WHC-27	Hood Canal - Anna's Bay to Lynch Cove		Yes	Yes			Yes	No												
WHC-28	Lynch Cove			Yes		Yes		No												

## **\* FLIGHT AND GROUND ENTRY RESTRICTIONS**

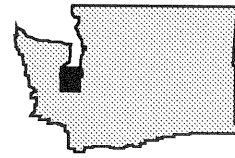
 Flights below 1000 feet require clearance: See appendix on Flight Restriction Zones

 Sensitive season - Minimize overflight disturbance



**BELFAIR****FLIGHT RESTRICTION ZONES FOR SENSITIVE WILDLIFE SPECIES**

1. Pilots refer to the chapter on Flight Restriction Zones.
2. All ground entry within 100 yards of sensitive nesting species is restricted.
3. All boaters are requested to approach no closer than 100 yards to seal and waterfowl concentrations.

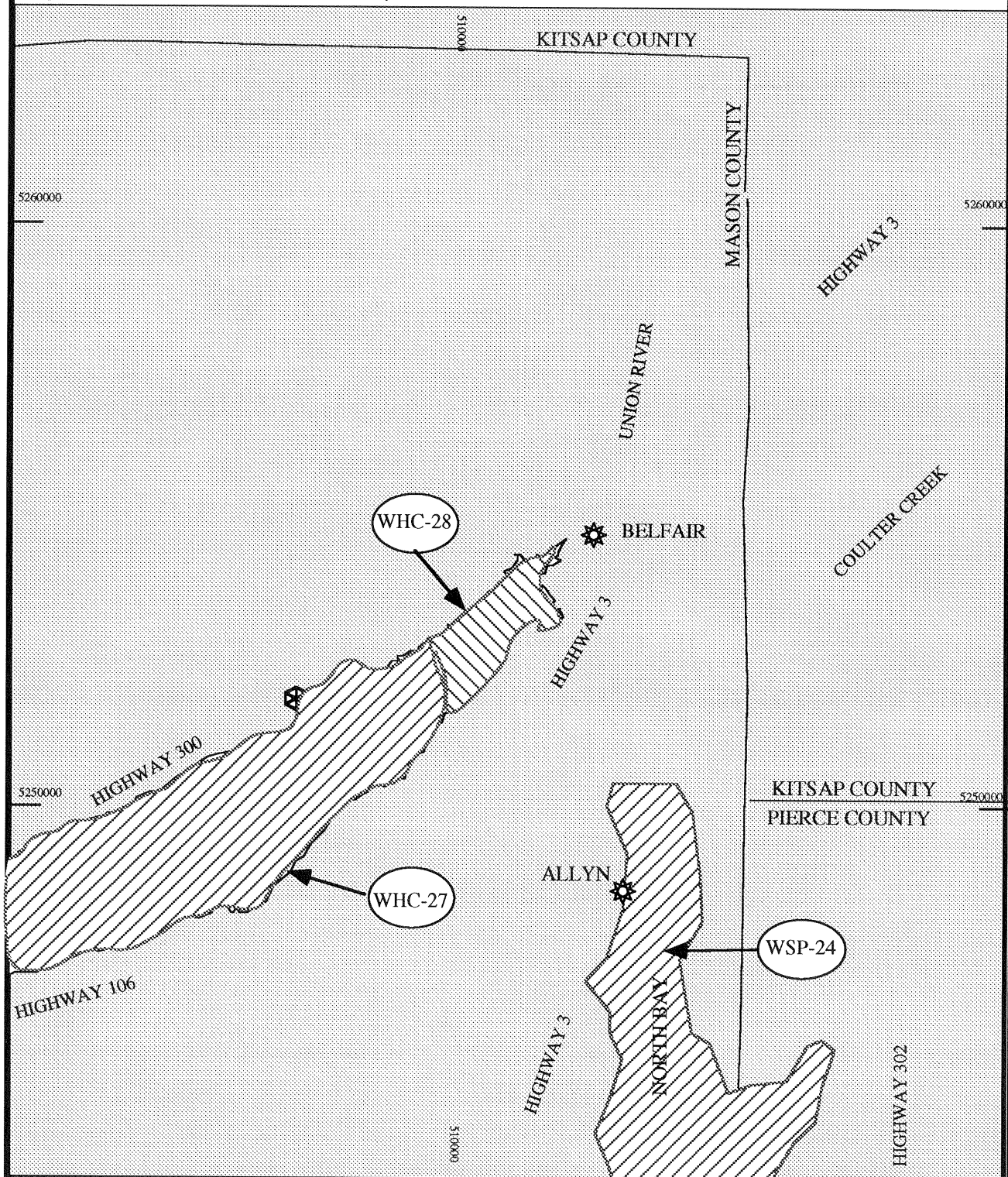



- MARINE MAMMAL HAULOUT
- SENSITIVE SPECIES NESTING
- ⊗ BOAT LAUNCH

- ▨ PARK OR PUBLIC LAND
- ▨ RESERVATION
- ★ TOWN OR CITY



BIRD CONCENTRATION AREA



 Includes half the month

## CASE INLET FLIGHT RESTRICTION ZONES / SENSITIVE WILDLIFE

Map Page 18448

		Seabird	Seabird	Waterfowl	Marine Mammal	Sensitive	Shorebird	Flight	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	Location	Colony	Conc	Conc	Haulout	nesting species	Conc	Exclusion												
WSP-2	Carr Inlet		Yes	Yes				No												
WSP-6	Penrose Point					Yes		Yes												
WSP-10	McDermott Point			Yes				No												
WSP-14	Johnson Pt / Treble Pt		Yes					No												
WSP-15	Devil's Head					Yes		Yes												
WSP-21	Cape Horn					Yes		Yes												
WSP-23	McMicken Island				Yes			Yes												
WSP-24	Case Inlet		Yes					No												

### \* FLIGHT AND GROUND ENTRY RESTRICTIONS

 Flights below 1000 feet require clearance: See appendix on Flight Restriction Zones

 Sensitive season - Minimize overflight disturbance

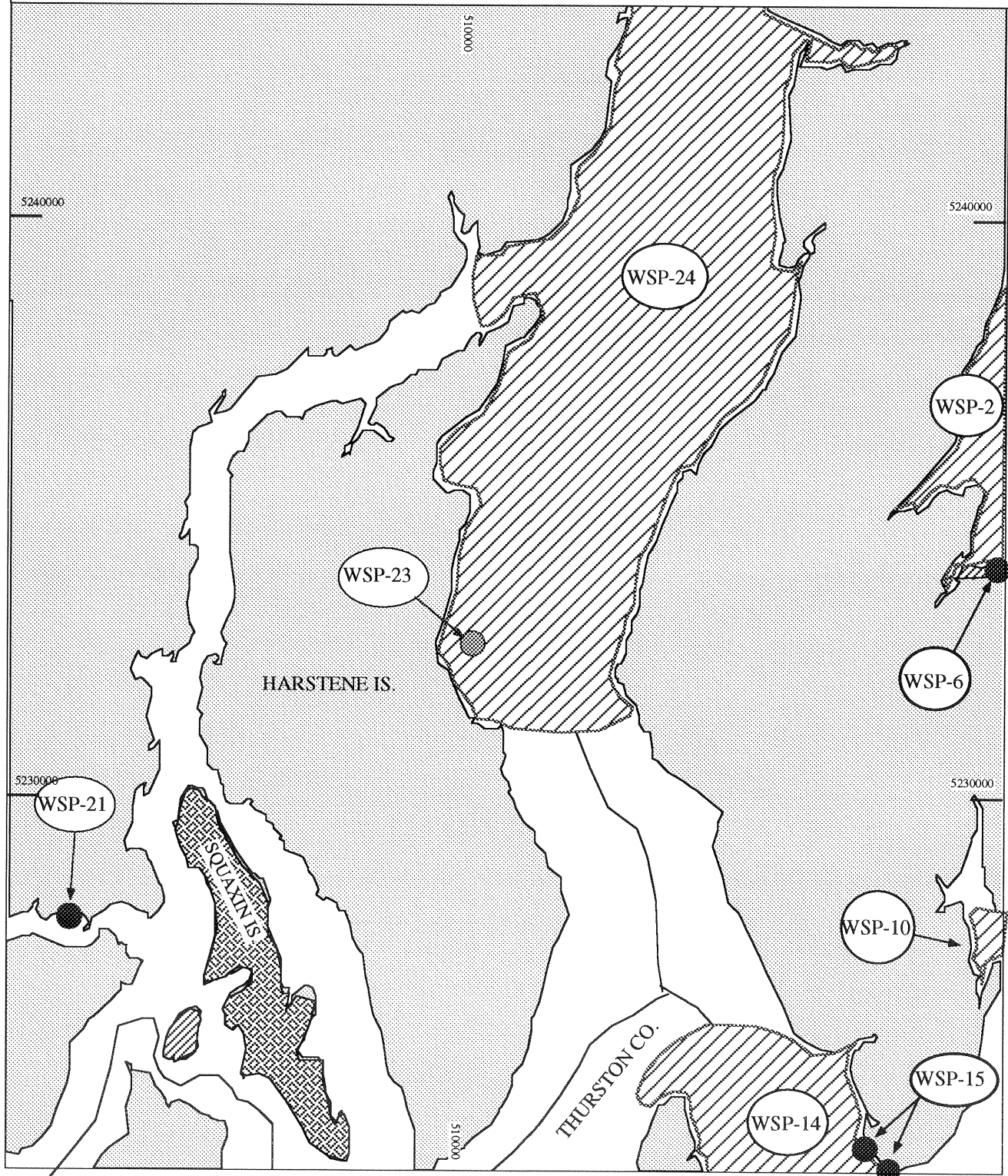
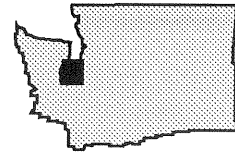
**CASE INLET****FLIGHT RESTRICTION ZONES FOR SENSITIVE WILDLIFE SPECIES**

1. Pilots refer to the chapter on Flight Restriction Zones.
2. All ground entry within 100 yards of sensitive nesting species is restricted.
3. All boaters are requested to approach no closer than 100 yards to seal and waterfowl concentrations.

- MARINE MAMMAL HAULOUT
- SENSITIVE SPECIES NESTING
- ⊞ BOAT LAUNCH

- ▨ PARK OR PUBLIC LAND
- ▩ RESERVATION
- ★ TOWN OR CITY

- ▨ BIRD CONCENTRATION AREA



Includes half the month

## SHELTON FLIGHT RESTRICTION ZONES / SENSITIVE WILDLIFE

Map Page 18448

Code	Location	Seabird Colony	Seabird Conc	Waterfowl Conc	Marine Mammal Haulout	Sensitive nesting species	Shorebird Conc	Flight Exclusion	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
WSP-7	Totten Inlet				Yes		Yes	No												
WSP-20	Oyster Bay			Yes			Yes	No												
WSP-22	Shelton				Yes			No												

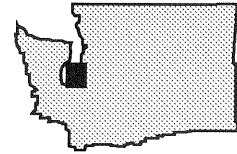
## \* FLIGHT AND GROUND ENTRY RESTRICTIONS

Flights below 1000 feet require clearance: See appendix on Flight Restriction Zones

Sensitive season - Minimize overflight disturbance

**SHELTON****FLIGHT RESTRICTION ZONES FOR SENSITIVE WILDLIFE SPECIES**

1. Pilots refer to the chapter on Flight Restriction Zones.
2. All ground entry within 100 yards of sensitive nesting species is restricted.
3. All boaters are requested to approach no closer than 100 yards to seal and waterfowl concentrations.

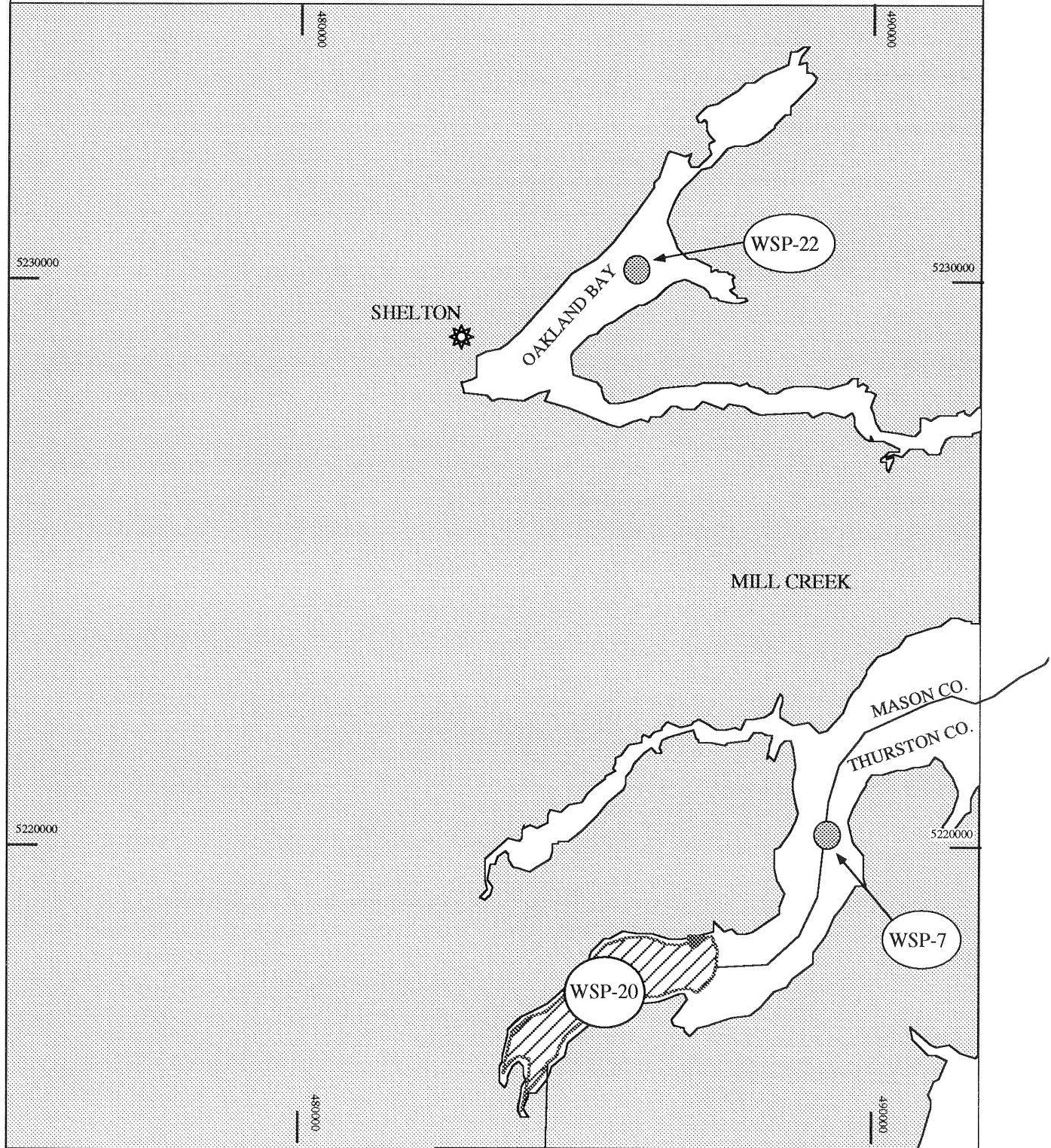


- MARINE MAMMAL HAULOUT
- SENSITIVE SPECIES NESTING
- ⊕ BOAT LAUNCH

- ▨ PARK OR PUBLIC LAND
- ▨ RESERVATION
- ⊙ TOWN OR CITY



BIRD CONCENTRATION AREA



Includes half the month

BUDD INLET FLIGHT RESTRICTION ZONES / SENSITIVE WILDLIFE

Map Page 18448

		Seabird	Seabird	Waterfowl	Marine Mammal	Sensitive	Shorebird	Flight	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	Location	Colony	Conc	Conc	Haulout	nesting species	Conc	Exclusion												
WSP-14	Johnson Pt / Treble Pt		Yes					No												
WSP-16	Henderson Inlet			Yes	Yes	Yes		Yes												
WSP-16a	Chapman Bay (include broomsticks of mouth)		Yes	Yes	400+	Yes		Yes												
WSP-16b	Woodard Bay			Yes		Yes		Yes												
WSP-17	East Bay			Yes				No												
WSP-18	Budd Inlet				Yes			Yes												
WSP-19	Eld Inlet				Yes			Yes												

\* FLIGHT AND GROUND ENTRY RESTRICTIONS

Flights below 1000 feet require clearance: See appendix on Flight Restriction Zones

Sensitive season - Minimize overflight disturbance



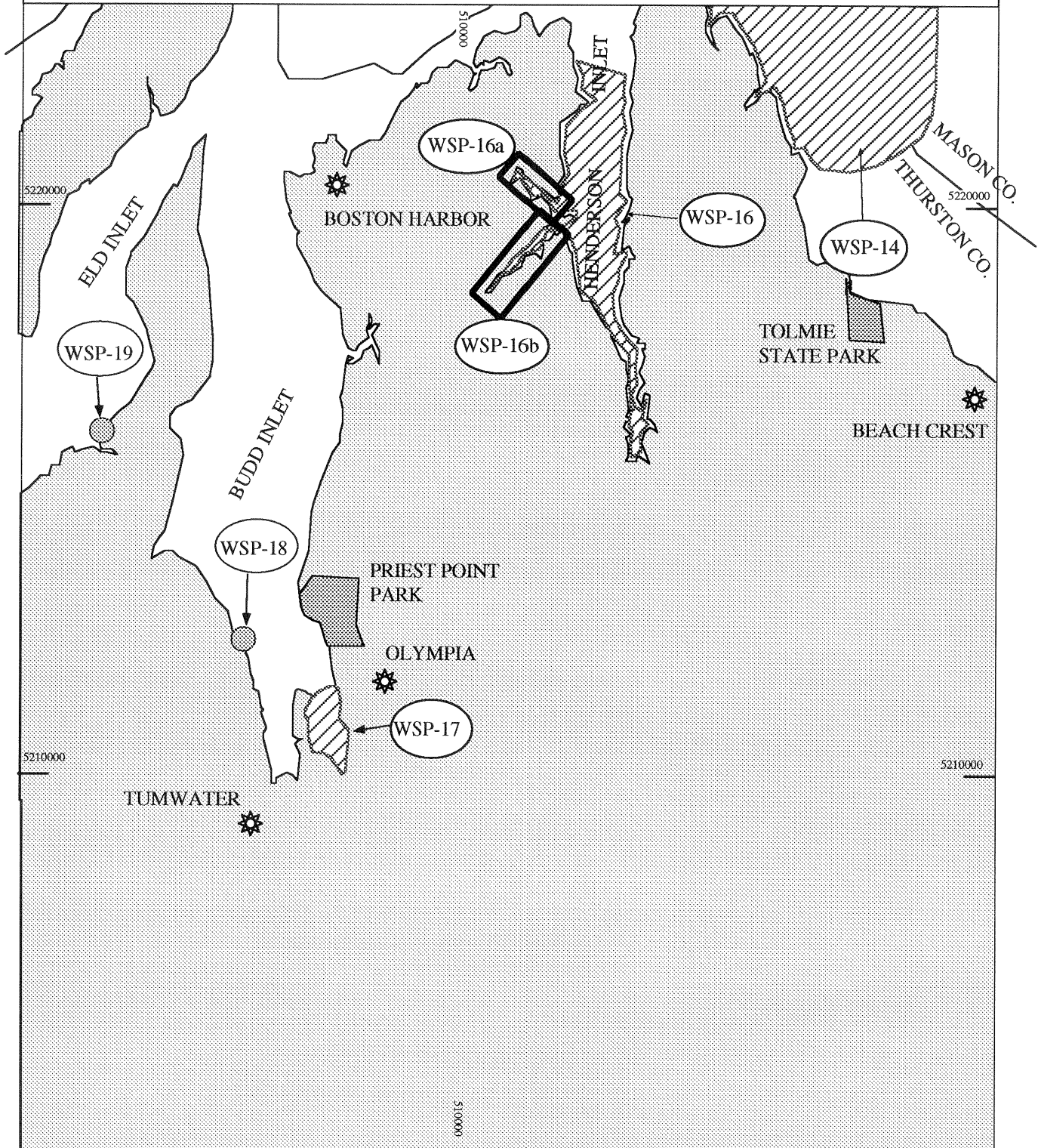
**BUDD INLET****FLIGHT RESTRICTION ZONES FOR SENSITIVE WILDLIFE SPECIES**

1. Pilots refer to the chapter on Flight Restriction Zones.
2. All ground entry within 100 yards of sensitive nesting species is restricted.
3. All boaters are requested to approach no closer than 100 yards to seal and waterfowl concentrations.

- MARINE MAMMAL HAULOUT
- SENSITIVE SPECIES NESTING
- ⚓ BOAT LAUNCH

- ▨ PARK OR PUBLIC LAND
- ▨ RESERVATION
- ★ TOWN OR CITY

- ▨ BIRD CONCENTRATION AREA



Includes half the month

**TOTTEN INLET FLIGHT RESTRICTION ZONES / SENSITIVE WILDLIFE**

Map Page 18448

Code	Location	Seabird Colony	Seabird Conc	Waterfowl Conc	Marine Mammal Haulout	Sensitive nesting species	Shorebird Conc	Flight Exclusion	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
WSP-7	Totten Inlet				Yes		Yes	No												
WSP-20	Oyster Bay			Yes			Yes	No												

**\* FLIGHT AND GROUND ENTRY RESTRICTIONS**

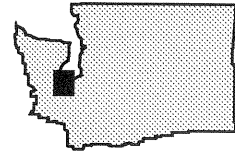
Flights below 1000 feet require clearance: See appendix on Flight Restriction Zones

Sensitive season - Minimize overflight disturbance



**TOTTEN INLET****FLIGHT RESTRICTION ZONES FOR SENSITIVE WILDLIFE SPECIES**

1. Pilots refer to the chapter on Flight Restriction Zones.
2. All ground entry within 100 yards of sensitive nesting species is restricted.
3. All boaters are requested to approach no closer than 100 yards to seal and waterfowl concentrations.



MARINE MAMMAL HAULOUT	PARK OR PUBLIC LAND	BIRD CONCENTRATION AREA
SENSITIVE SPECIES NESTING	RESERVATION	
BOAT LAUNCH	TOWN OR CITY	

